

Notice of Allowability

Application No.

10/677,479

Examiner

Ramesh B. Patel

Applicant(s)

KUWABARA, TAKAO

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2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/3/2003 and 6/13/2005.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 10/3/2003
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

1. Claims 1-20 are allowed.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in the Application.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on 10/3/2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is considered by the examiner and the initial and signed copy of PTO-1449 is provided herewith.
4. The following is an examiner's statement of reasons for allowance: the prior art of the record fails to teach or fairly suggest in combination with the other elements and features of the claimed invention regarding claims 1-10 and 13-14, a turbine apparatus and governor comprising: a runner rotatable to be rotationally driven by the water, a flow rate adjuster for adjusting a flow rate of the water to change an actual rotational speed of the runner and control device for generating a control signal for controlling the flow rate adjuster so that a difference between the actual rotational speed of the runner and

a desired rotational speed of the runner is decreased, wherein a derivative calculation element for generating a derivative component of the control signal whose value corresponds to a value obtained by performing differentiation on the value of the input signal with respect to a time proceeding and an integration calculation element for generating an integral component of the control signal whose value corresponds to a value obtained by performing integration on the value of the input signal with respect to the time proceeding and regarding claims 11 and 15-20, a turbine apparatus comprising: a runner rotatable to be rotationally driven by the water, a flow rate adjuster for adjusting a flow rate of the water to change an actual rotational speed of the runner and control device for generating a control signal for controlling the flow rate adjuster so that a difference between the actual rotational speed of the runner and a desired rotational speed of the runner is decreased wherein a derivative calculation element for generating a derivative component of the control signal whose value corresponds to a value obtained by performing differentiation on the value of the input signal with respect to a time proceeding and an integration calculation element for generating an integral component of the control signal whose value corresponds to a value obtained by performing integration on the value of the input signal with respect to the time proceeding, and when Q is the flow rate of the water for driving rotationally the runner, H is a head of the water for driving rotationally the runner, N is the actual rotational speed of the runner, T is a torque for driving rotationally the runner, $N_{\text{sub.1}} = N / \{\text{square root}\} \{\text{square root over (H)}\}$, $Q_{\text{sub.1}} = Q / \{\text{square root}\} \{\text{square root over (H)}\}$, and $T_{\text{sub.1}} = T / H$, under at least one of a case in which

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$\frac{dQ}{dN} > 0$, a case in which $\frac{dT}{dN} > 0$, a case in which the absolute value of $\frac{dQ}{dN}$ is more than the first value, and a case in which the absolute value of $\frac{dT}{dN}$ is more than the second value, a transition from increase to decrease of an opening area of the flow rate adjuster occurs with a delay in phase angle not more than 120 degrees from a transition from increase to decrease of the actual rotational speed of the runner.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramesh B. Patel whose telephone number is 571-272-3688. The examiner can normally be reached on M-Th; 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571-272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ramesh B. Patel
Primary Examiner 4/14/06
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